

Notice of Allowability

Application No.

09/016,002

Examiner

Ella Colbert

Applicant(s)

LAMPERT ET AL

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 02 November 2006.
2. ☒ The allowed claim(s) is/are 2-10, 13-15, 17, 19, 20 and 23-29.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

1. Claims 2-10, 13-15, 17, 19, 20, 23-26, 28 and 29 are pending. Claims 2-10, 17, 19, 23, 26, and 28 have been allowed and claims 13-15, 20, 24, 25, and 29 are under appeal. The Appeal Brief was filed 11/02/06 and entered. An Appeal Conference was held on January 18, 2007 and a decision was made to allow these claims too.

Reopening Prosecution

2. In view of the Appeals Conference Decision on 01/18/07, **PROSECUTION IS HEREBY REOPENED** as set forth here below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

- (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,
- (2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Authorization has been given by the SPEs (Supervisor's) signature on the last page of this Office Action.

Allowable Subject Matter

3. Claims 2-10, 13-15, 17, 19, 20, 23-26, 28, and 29 are allowed.

The following is an examiner's statement of reasons for allowance: The prior art of record (Janse et al. US Pat. No. 5,754,846) teaches an index for retrieving data related

to main cells and another index related to base cells. White, Jr. et al (US Pat. No. 5,694,534) teaches geographic areas and divides the geographic region into "carriers" using the actual topological structures located in the region but fails to teach the topological areas corresponding to a "carrier" (parcel) are divided into rectangular sub-areas or that any of the indexes are associated with any of the "carriers" (parcels) related to any of the represented features to any further rectangular sub-areas. Bellesfield et al (US Pat. No. 6,282,489) teaches a geographic database and a search area but fails to teach parcels of data based on a division of the represented geographic region into rectangular areas, geographic features located within a first rectangular area that intersects the specified search area, and using a first index to identify which rectangular sub-areas of the first rectangular area are intersected by the search area and the second index to identify the data entities in the parcel that represent geographic features that intersect the rectangular sub-areas identified by the first index. Israni et al (US Pat. No. 5,968,109) teaches a geographic database organized into parcels with some of the parcels including an internal kd-tree index for performing spatial searches of the data contained in the parcel with the geographic area associated with a cartographic parcel divided into cells with each cell having its own separate data records for any geographic features located within the cell, a geographic feature that spans several cells is divided up into smaller features then a separate data record is formed but the Israni patent is assigned to the Applicant, Navteq North America, LLC.

The prior art of record fails to teach the subset of the plurality of data entities contained in each parcel represents the geographic features located in a separate one

of the plurality of areas into which the geographic region is divided and dividing an area associated with a single parcel into a plurality of sub-areas and storing an index that identifies, for each of the entities contained in the parcel, each of the sub-areas intersected by the geographic feature represented thereby in claim 23, using a first index associated with a parcel to identify which of the plurality of rectangular sub-areas into which the first rectangular area is divided to intersect the search area and using a second index associated with the parcel to identify the data entities contained in the parcel that represent the geographic features that intersect each of the plurality of rectangular sub-areas identified as intersecting the search area and the second index identifies the single data entity in claim 24, using a first index associated with a parcel to identify each rectangular sub-area formed of the rectangular area associated with the parcel that intersects the search area and using a second index associated with the parcel to identify each of the data entities contained therein that represents a geographic feature that intersects each of the sub-areas in claim 25, the plurality of groupings are based upon a division of the area associated with the parcel into a plurality of smaller sub-areas in claim 26, each index relating each of the data entities in the subset of data entities contained in the parcel associated with at least one rectangular sub-area formed from the rectangular area associated with the parcel in claim 27, and a plurality of first and second indexes each of which is associated with a respective one of the plurality of parcels wherein each first index defines a plurality of sub-areas and the second index associates each of the data records in the parcel with at least one of the plurality of sub-areas defined by the first index associated with the

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parcel in claim 29. For these reasons claims 23-26, and 29 are deemed to be allowable over the prior art of record, and claims 2-10, 13-15, 17, 19, 20, and 28 are allowed by dependency.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure.

Herring et al (US 4,969,114); Nilsen et al (US 5,987,306)

Furuya et al (JP 410013946A); Mannings et al (EPO 837341A1)

Kitsuregawa, Masaru; Harada, Lilian; Takagi, Mikio; "Join Strategies on KD-Tree Indexed Relations"; IEEE; Feb. 1989; Pages 85-93.

IBM Technical Disclosure Bulletin; "Hierarchical Data Model for Relational Database Based Geographic Information System"; March 1997; Vol. 40; Issue No. 3; Pages 107-116.

Inquiries

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ella Colbert whose telephone number is 571-272-6741. The examiner can normally be reached on Monday, Tuesday, and Thursday, 5:30AM-3:00PM.


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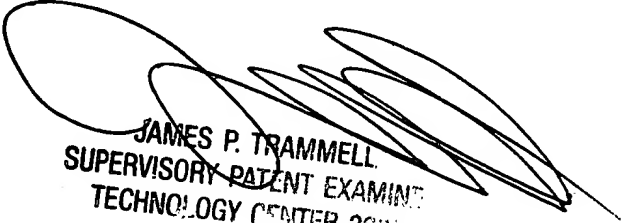
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Trammell can be reached on 571-272-6712. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

January 20, 2007

SPE Signature


ELLA COLBERT
PRIMARY EXAMINER


JAMES P. TRAMMELL
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